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Glaziers select, cut, assemble, and install all makes and kinds of glass, and perform a variety of related tasks. In a shop setting, Glaziers build metal sash and moldings using aluminum or steel framing. The metal is cut and shaped for storefront facings; entrances in commercial, office, and factory buildings; and glass doors and windows of all types.

At a construction site, Glaziers attach the formed metal moldings to the building. The job is finished by fitting in the glass and, if necessary, attaching face moldings, weather seals, or hardware, and adjusting door or window operation. Less skill is required of Glaziers installing prefabricated glass products that are increasingly used in building construction. Although some Glaziers may specialize in jobs such as installation of tub or shower doors, many learn to handle all the different types of glass installation and the special problems presented by each.

**Tasks**

- ▶ Assemble, fit, and attach metal-framed glass enclosures for showers or bathtubs to couplings, and glass enclosures for showers or bathtubs to framing around bath enclosure.
- ▶ Measure mirror and dimensions of area to be covered and determine plumb of walls or ceilings, using plumb-line and level.
- ▶ Attach mounting strips and moldings to surface and apply mastic cement, putty, or screws to secure mirrors into position.
- ▶ Cover mirrors with protective material to prevent damage.
- ▶ Drive truck to installation site and unload mirrors, equipment, and tools.
- ▶ Move furniture to clear work site and covers floors and furnishings with drop cloths.
- ▶ Load and arrange mirrors on truck, following sequence of deliveries.
- ▶ Measure, cut, fit, and press antiglare adhesive film to glass or spray glass with tinting solution to prevent light glare.
- ▶ Fasten glass panes into wood sash and spread and smooth putty around edge of pane with knife to seal joints.
- ▶ Install pre-assembled framework for windows or doors designed to be fitted with glass panels, including stained glass windows, using hand tools.

Detailed descriptions of this occupation may be found in the Occupational Information Network (O\*NET) at [online.onetcenter.org](http://online.onetcenter.org).

## Glaziers

### Important Skills, Knowledge, and Abilities

- ▶ Building and Construction — Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
- ▶ Installation — Installing equipment, machines, wiring or programs to meet specifications.
- ▶ Mathematics — Using mathematics to solve problems.
- ▶ Equipment Selection — Determining the kind of tools and equipment needed to do a job.
- ▶ Information Ordering — The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
- ▶ Arm-Hand Steadiness — The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.

### Work Environment

Glaziers often work outdoors. They do a considerable amount of bending, kneeling, lifting, and standing. Minor cuts from glass edges and sharp tools are common in this occupation. Safety training given by employers and unions have helped reduce the incidence of severe cuts. Glaziers also face the danger of falls from scaffolding and the possibility of injury from lifting.

This occupation is heavily unionized in commercial construction, and some jobs in retail are also under union contract. Union membership is high in big cities such as San Francisco and Los Angeles. Many workers belong to the Glaziers and Glass Workers Union of the Brotherhood of Painters and Allied Trades.

Most Glaziers work 40 hours a week. However, some union locals have negotiated alternating 32 and 40 hour weeks. Overtime may be necessary during the peak construction periods.

### California's Job Outlook and Wages

The California Outlook and Wage table below represents the occupation across all industries.

Standard Occupational Classification	Estimated Number of Workers 2004	Estimated Number of Workers 2014	Average Annual Openings	2006 Wage Range (per hour)
<b>Glaziers</b>				
47-2121	4,900	6,000	210	\$13.78 to \$28.45

*Wages do not reflect self-employment.*

*Average annual openings include new jobs plus net replacements.*

*Source: [www.labormarketinfo.edd.ca.gov](http://www.labormarketinfo.edd.ca.gov), Employment Projections by Occupation and OES Employment & Wages by Occupation, Labor Market Information Division, Employment Development Department.*

### Trends

This occupation will have a growth rate of more than 22 percent during the 2004–2014 projections period. This growth will be fueled in large measure by the increased demand for new housing in California as well as by demand for window repair and improvement.

## Training/Requirements/Apprenticeships

Glaziers usually follow one of the following training paths:

- ▶ Formal apprenticeship
- ▶ Extensive on-the-job training
- ▶ Vocational school

Completion of a four-year apprenticeship is the usual way to become a Glazier. To be eligible for apprenticeship, the applicant must be at least 17 and a high school graduate or its equivalent, with adequate grades in mathematics and a passing score on an aptitude test. Upon being accepted into a program, apprentices attend evening trade classes at local schools. Journey-level workers keep current by studying manufacturers' manuals.

### Recommended High School Course Work

Besides mathematics, helpful high school classes include mechanical drawing, metalshop, and woodshop.

## Where Do I Find the Job?

Candidates for training or apprenticeship programs should apply to a union local for Glaziers. Direct application to employers is an effective job search method for journey-level Glaziers.

Use the *Search for Employers by Industry* feature on the *Career Center* page at [www.labormarketinfo.edd.ca.gov](http://www.labormarketinfo.edd.ca.gov) to locate employers in your area. Search using keywords from the following construction industry names to get a list of private firms and their addresses:

- |                                       |   |
|---------------------------------------|---|
| ▶ Automotive Body and Interior Repair | ▶ Metal Window and Door Manufacturing     |
| ▶ Car Washes                          | ▶ Ornamental and Architectural Metal Work |
| ▶ Fabricated Structural Metal Mfg.    | ▶ Other Automotive Mechanical Repair      |
| ▶ General Automotive Repair           | ▶ Other Building Material Dealers         |
| ▶ Hardware Stores                     | ▶ Paint and Wallpaper Stores              |
| ▶ Home Centers                        | ▶ Sheet Metal Work Manufacturing          |

For local listings of contractors, search these **yellow page** headings for listings of private firms:

- |                                 |                                 |
|---------------------------------|---------------------------------|
| ▶ Glass-Plate & Window          | ▶ Windows-Repair & Installation |
| ▶ Glaziers                      | ▶ Windows-Storm                 |
| ▶ Shower Doors & Tub Enclosures | ▶ Windows-Vinyl                 |
| ▶ Windows-Aluminum & Metal      | ▶ Windows-Wood                  |

## Where Can The Job Lead?

Journey-level Glaziers can advance to the position of supervisor or they may go into business as glazing contractors. Businesses involved in glazing contracting need licensing from the Contractors State Licensing Board of the California State Department of Consumer Affairs. (See *Other Sources of Information*.)

# Glaziers

## Other Sources of Information

Glass Association of North America  
[www.glasswebsite.org](http://www.glasswebsite.org)

United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry  
[www.ua.org](http://www.ua.org)

California Department of Industrial Relations, Division of Apprenticeship Standards  
[www.dir.ca.gov/das](http://www.dir.ca.gov/das)

California Department of Consumer Affairs, Contractors State Licensing Board  
[www.cslb.ca.gov](http://www.cslb.ca.gov)